

Case 3050

***Pachylops* Fieber, 1858 (Insecta, Heteroptera): proposed designation of *Capsus chloropterus* Kirschbaum, 1856 (currently *Orthotylus virescens* (Douglas & Scott, 1865)) as the type species**

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Abstract. The purpose of this application is to conserve the heteropteran subgeneric name *Pachylops* Fieber, 1858 (family MIRIDAE; genus *Orthotylus* Fieber, 1858) in its original concept with *Capsus chloropterus* Kirschbaum, 1856 (an invalid subjective synonym of *Orthotylus virescens* (Douglas & Scott, 1865)) as its type species. The Commission's designation (Opinion 253, 1954) of *Litosoma bicolor* Douglas & Scott, 1868 as the type was based on the wrong assumption that Fieber had misidentified the type species, and because it results in instability of the nomenclature of several genus-group taxa it is proposed that Opinion 253 be set aside.

Keywords. Nomenclature; taxonomy; Heteroptera; MIRIDAE; *Hypsitylus*; *Neopachylops*; *Orthotylus*; *Pachylops*; *Platycranus*; *Orthotylus virescens*.

1. Kirschbaum (1856, p. 249) described the mirid bug *Capsus chloropterus* from Germany (Wiesbaden), basing the species on specimens of both sexes. Fieber (1858, p. 314) established the genus *Pachylops* in a key with *Capsus chloropterus* Kirschbaum as the only included species. Later Fieber (1861, pp. 285, 286) gave a description of the species, based on both sexes, and recorded it from S.E. France (Hyères) in addition to Germany. He compared *Pachylops* with a new genus *Hypsitylus* he described in the same paper (p. 286).

2. Douglas & Scott (1865, p. 339) described *Litosoma virescens* from England (Bromley and Weybridge) based on specimens of both sexes. Kirschbaum's and Douglas & Scott's names are subjective synonyms, as first shown by Reuter (1877, p. 128) and confirmed by Wagner (1939, pp. 47, 69) who examined syntypes of *Capsus chloropterus* Kirschbaum in the Wiesbaden Museum. Kirschbaum's name is a junior primary homonym of *Capsus chloropterus* Herrich-Schaeffer, 1853 and cannot be used as a valid name; the species is currently named *Orthotylus* (*Neopachylops*) *virescens* (Douglas & Scott, 1865).

3. Douglas & Scott (1865, p. 345) recorded '*Litosoma chloropterus* Kirschbaum' from England, stating that it was 'not an uncommon species on broom [*Sarothamnus scoparius*] near Blackheath and at Charlton, in July'. These authors were assisted

by Fieber in the identification of specimens, and their description of *Litosoma chloropterus* agrees with *Capsus chloropterus* Kirschbaum, and also with their own species *L. virescens* (see para. 2 above).

4. Later, Douglas & Scott (1868, p. 267) described a new species *Litosoma bicolor* from specimens of both sexes stating that it was 'not uncommon by beating furze bushes [*Ulex europaeus*] at Esher [England] in August'. In 1875 (p. 185), Douglas & Scott synonymized *L. bicolor* with *Capsus chloropterus* Kirschbaum. This was surprising, as they stated that some males of *L. bicolor* sent by them to Fieber had been identified by him as a species different from *L. chloropterus*. They speculated that Fieber did not know the males of *Capsus chloropterus* and that Kirschbaum, in his original description, had failed to note the characteristic coloration of males; both these assumptions are incorrect. It is possible that a female of *L. bicolor* from England sent by Douglas and Scott, apparently after 1865 and certainly long after the description of *Pachylops*, had been misidentified by Fieber as *chloropterus*; this may be the source of the subsequent confusion.

5. Reuter (1877, pp. 128–129) showed that *Capsus chloropterus* Kirschbaum was not synonymous with *Litosoma bicolor* Douglas & Scott. He also noted that 'It [*Litosoma bicolor*] is probably identical with the *Pachylops chloropterus*, Fieber (Eur. Hem. p. 285), of which I have not seen a typical specimen', but did not indicate his reason for this belief. He speculated that possibly Kirschbaum had sent to Fieber a specimen of *L. bicolor* misidentified as *C. chloropterus*; in point of fact, *L. bicolor* does not occur in Germany and Kirschbaum apparently did not collect abroad.

6. In 1883 Reuter (p. 342) transferred *L. bicolor* to the genus *Hypsitylus* Fieber, 1861 (type species *H. prasinus*). He treated *Pachylops chloropterus* sensu Fieber (see para. 1 above) as a probable misidentification of *L. bicolor* Douglas & Scott, and used *Hypsitylus* as the valid name, with the earlier name *Pachylops* in synonymy. This nomenclature was followed by later authors (e.g. Reuter, 1910, p. 149; Oshanin, 1910, pp. 837, 848 and 1912, p. 74; Seabra, 1926, pp. 13, 37).

7. However, Kirkaldy (1906, p. 127) accepted *Pachylops* as the valid name with the type species stated to be '*chloropterus* [sensu] Fieb. (= *bicolor* D. & S.)', and placed *Hypsitylus* in synonymy under *Pachylops*. China (1943, pp. 266, 323–324) feared that if *C. chloropterus* were accepted as type species of *Pachylops*, the latter name would become a senior synonym of *Orthotylus* Fieber, 1858 on the grounds of page priority (see para. 1 above), even though (pp. 269, 270, 272) he correctly noted that page priority had no nomenclatural significance. China, without trying to justify his claim, stated that 'the Kirschbaum species [*Capsus chloropterus*] agrees neither with Fieber's generic description [of *Pachylops*] nor with the description of the type species given by Fieber' and that the species actually involved as the type of *Pachylops* was *Litosoma bicolor*. On these grounds China (1947, p. 285) asked the Commission to rule 'that the type of *Pachylops* Fieber, 1858, is *Litosoma bicolor* Douglas & Scott, 1868, and not *Capsus chloropterus* Kirschbaum, 1855, the single species included in the genus by Fieber ...'. China's request was accepted by the Commission in Opinion 253 (1954).

8. This type fixation, as is now clear, was based on the misinterpretation of facts. Claims that Fieber had misidentified *Capsus chloropterus* Kirschbaum were never debated. Careful examination of Fieber's 1858 and 1861 works shows without any

doubt that his identification of this species was correct. According to characters shown by Reuter (1883, p. 342) to distinguish '*Orthotylus virescens*' from '*Hypsitylus bicolor*', Fieber's (1861, p. 285) description (coloration of both sexes grass green; rostrum not reaching apex of mesosternum; apices of tibiae blackish; tibial spines blackish) fits *Litosoma virescens* and not *L. bicolor* (coloration pale green, in males with a brownish longitudinal stripe; rostrum surpassing mesosternum; tibiae unicolorous; tibial spines pale). The short rostrum is noted in the original description of *Pachylops*, and the accompanying figure of the head and rostrum fits a female of *L. virescens*. It is noteworthy also that *L. virescens* is known from both regions indicated by Fieber (Germany and the eastern half of the Mediterranean coast of France), while *L. bicolor* does not occur in either region (Wagner, 1956; Ehanno, 1983). It is, therefore, clear that Fieber's (1858, 1861) identification of *Capsus chloropterus* Kirschbaum was correct and the name *Pachylops* was given by him to the taxon currently called *Neopachylops* Wagner, 1956 (a subgenus of *Orthotylus* Fieber, 1858).

9. The species *Litosoma bicolor* Douglas & Scott, 1868 is relatively rare and has a limited distribution; it has never been subject to serious taxonomic study. Figures attributed to '*Pachylops bicolor*' in monographs by Wagner & Weber (1964, p. 310) and Wagner (1974, p. 170) are of *Hypsitylus prasinus* Fieber, 1861. Recent examination of *L. bicolor* by one of us (A.C.) based on specimens from England and France show that this species is not congeneric with other species currently placed in *Pachylops* (or *Neopachylops*) and undoubtedly belongs to the genus *Platycranus* Fieber, 1870, subgenus *Genistocapsus* Wagner, 1956.

10. The nomenclatural problems following from paras. 8 and 9 (above) concern several genus-group names of European and Mediterranean ORTHOTYLINAE (MIRIDAE). All species of these genera and subgenera live on Fabaceae (*Sarothamnus*, *Ulex*, *Genista*, etc.); none of them is of economic importance. The implications of the Commission's ruling in Opinion 253 are wide ranging. If it were to be followed, *Pachylops* Fieber, 1858 would replace the long-used generic name *Platycranus* Fieber, 1870 (p. 252; type species *P. erheri* Fieber, 1870; 16 species) and the name of its subgenus *Genistocapsus* Wagner, 1956 (p. 424; type species *P. metriorrhynchus* Reuter, 1883; 10 species).

11. The name *Hypsitylus* Fieber, 1861 (p. 286; type species *H. prasinus* Fieber, 1861) used before 1943 (see para. 7 above) should be restored for a monotypic genus. If the ruling in Opinion 253 were to be set aside, the original concept of *Pachylops* would be restored and this name would replace the relatively recent name *Neopachylops* Wagner, 1956 (p. 394; type species *Capsus concolor* Kirschbaum, 1856) for a subgenus of *Orthotylus*; this subgenus contains 15 species.

12. In order to obtain the views of specialists, a questionnaire with all possible solutions to the problem (including suppression of the name *Pachylops* or designation for it of another type species) was sent to nine specialists from France (C. Dupuis, B. Ehanno, A. Matocq, J. Péricart), Spain (M. Goula, J. Ribes), Austria (E. Heiss), the Netherlands (B. Aukema) and Italy (F. Faraci). All of them voted for setting aside Opinion 253. Based on this unanimous vote, we have not followed the ruling given in that Opinion and have accepted the original fixation of *Capsus chloropterus* Kirschbaum as the type species of *Pachylops* (Carapezza, 1997; Kerzhner & Josifov, in press).

13. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary powers to set aside the designation in Opinion 253 of *Litosoma bicolor* Douglas & Scott, 1868 as the type species of *Pachylops* Fieber, 1858;
- (2) to emend the entry for *Pachylops* Fieber, 1858 in the Official List of Generic Names in Zoology to record the type species as *Capsus chloropterus* Kirschbaum, 1856 by monotypy;
- (3) to emend the entry for *bicolor*, *Litosoma*, Douglas & Scott, 1868, in the Official List of Specific Names in Zoology to delete reference to it as the specific name of the type species of *Pachylops* Fieber, 1858;
- (4) to place on the Official List of Specific Names in Zoology the name *virescens* Douglas & Scott, 1865, as published in the binomen *Litosoma virescens* (valid subjective synonym of the specific name of *Capsus chloropterus* Kirschbaum, 1856, the type species of *Pachylops* Fieber, 1858).

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).